



# 14269 - Just the BASICS: Linking Gas Flows in the Circumgalactic Medium to Galaxies

Cycle: 23, Proposal Category: GO  
(Availability Mode: SUPPORTED)

## INVESTIGATORS

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## VISITS

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
01	(1) J1419+4207	ACS/WFC	1	12-Apr-2016 21:02:58.0	yes
02	(2) J1435+3604	ACS/WFC	1	12-Apr-2016 21:02:59.0	yes
03	(3) J1619+3342	ACS/WFC	1	12-Apr-2016 21:03:00.0	yes

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
04	(4) J1005+0134	ACS/WFC	1	12-Apr-2016 21:03:01.0	yes
05	(5) PG1338+416	ACS/WFC	1	12-Apr-2016 21:03:02.0	yes
06	(6) PG1407+265	ACS/WFC	1	12-Apr-2016 21:03:03.0	yes
07	(7) PG1630+377	ACS/WFC	1	12-Apr-2016 21:03:04.0	yes
08	(8) PG1522+101	ACS/WFC	1	12-Apr-2016 21:03:05.0	yes
09	(9) PHL1377	ACS/WFC	1	12-Apr-2016 21:03:06.0	yes
10	(10) PKS0552-640	ACS/WFC	1	12-Apr-2016 21:03:06.0	yes
11	(11) PKS0637-752	ACS/WFC	1	12-Apr-2016 21:03:07.0	yes
12	(12) HE0439-5254	ACS/WFC	1	12-Apr-2016 21:03:08.0	yes
13	(13) J0943+0531	ACS/WFC	1	12-Apr-2016 21:03:09.0	yes
14	(14) PG1634+706	ACS/WFC	1	12-Apr-2016 21:03:10.0	yes

14 Total Orbits Used

## ABSTRACT

With HST/COS, we have discovered the cool, dense circumgalactic medium (CGM) of galaxies exhibits a bimodal metallicity distribution with well-separated branches peaking at 3% and 40% solar. The metal-rich peak may probe winds, recycled outflows, and tidally-stripped gas, while the metal-poor branch may trace cold accretion streams - a major source of fresh gas for star forming galaxies. We have also demonstrated strong CGM MgII absorbers are found preferentially along galaxies' poles, as expected if they arise in outflowing winds. These two results both give us fundamental insight into the manner in which galaxies exchange gas with the CGM, but the metallicity and geometry properties have never been jointly applied. We propose the Bimodal Absorption System Imaging Campaign (BASIC) to image 14 QSO fields with ACS. Combined with 9 archival HST fields, we will measure the geometry and morphology of 28 galaxies with well-characterized CGM absorbers. We will test if the bimodal metallicity distribution is connected to the geometric orientation of galaxies as predicted by simulations, assess the contribution of tidal-debris to CGM absorption, and measure the relationship of galaxy geometry and morphology to a broad range of cold/warm CGM tracers (especially OVI). Our sample is unique in that the metallicity of the CGM absorbers is well determined; it is the only sample for which this experiment can be done. The sight lines imaged by BASIC also represent an unique set of QSOs, many at  $z \sim 1$  and having the best S/N COS spectra available. BASIC will therefore enable science beyond its immediate goals, e.g., connecting the Ly $\alpha$  forest and metal-line absorbers with galaxies at  $z < 1$ .

## **OBSERVING DESCRIPTION**

This program will image galaxies associated with  $z < 1$  Lyman limit systems drawn from Lehner et al. (2013, ApJ, 770, 138) to study their morphologies and orientations relative to the sight line (azimuthal and inclination angles). We will observe the QSO fields with the F814W filter, which covers the rest-frame optical light at  $z \sim 1$ . The visibility for our targets is between 54 and 61 minutes. Accounting for standard instrument and observatory overheads from the Cycle 23 ACS instrument handbook, we are left with about 41 to 49 minutes of exposure time in a single orbit. Our images will reach 5-sigma limiting magnitudes of  $AB = 25.6$  in ACS/F814W corresponding to a  $\sim 0.1 L^*$  galaxy at  $z \sim 1$ . This depth from one-orbit ACS imaging is therefore adequate to determine robustly the galaxy shape parameters, orientations, and quantitative evidence of interactions at the limits of our spectroscopic galaxy depth sample.

Our imaging centers each QSO at the WFC1 aperture, providing a FOV in the WFC1 chip alone of  $202'' \times 101''$ , which allows us to probe galaxies associated with these  $z = 0.2$  to 1 absorbers at proper distances of at least 150 kpc in radius before encountering the edge of the WFC1 chip. Each field is imaged in a single orbit. We have adopted a 4 point box dither pattern to better sample the PSF and allow for cosmic ray and hot pixel removal. The exposure time at each step in the pattern is  $\sim 570$  sec, depending on orbital visibility.

Proposal 14269 - Visit 01 - Just the BASICS: Linking Gas Flows in the Circumgalactic Medium to Galaxies

Wed Apr 13 01:03:11 GMT 2016

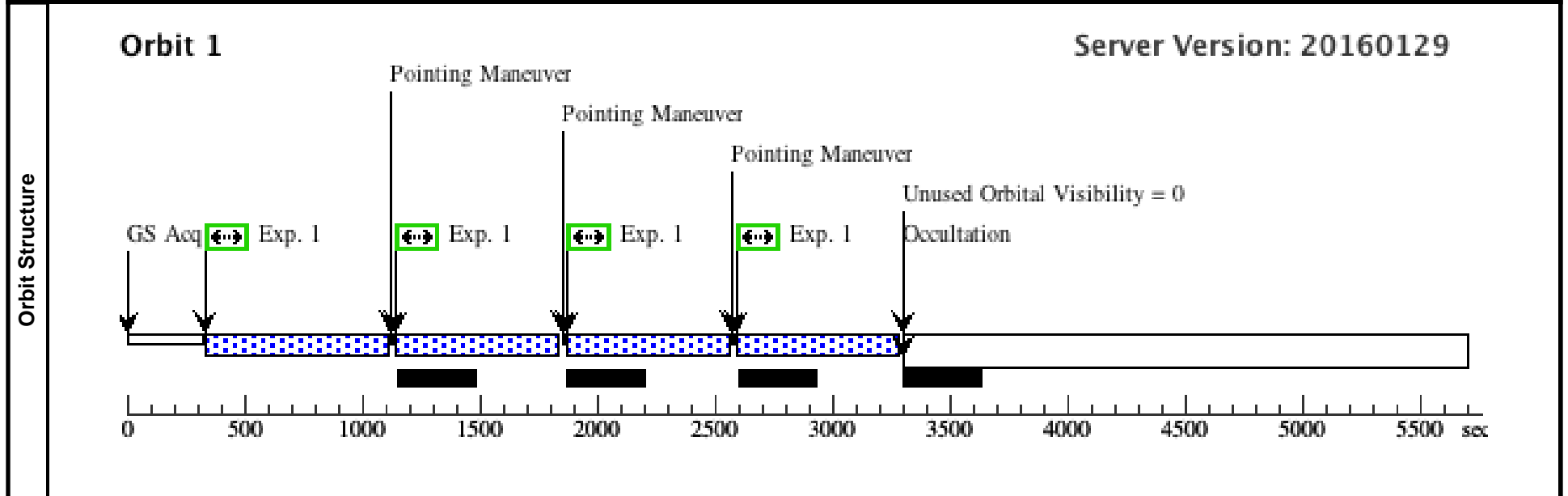
<b>Visit</b>	<b>Proposal 14269, Visit 01, scheduling</b>		
	<b>Diagnostic Status: No Diagnostics</b>		
	Scientific Instruments: ACS/WFC		
	Special Requirements: (none)		

<b>Patterns</b>	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.265 Line Spacing=0.187	Coordinate Frame=POS-TARG Pattern Orientation=20.67 Angle Between Sides=69.05 Center Pattern=false	

<b>Fixed Targets</b>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	J1419+4207	RA: 14 19 10.2003 (214.7925012d) Dec: +42 07 46.92 (42.12970d) Equinox: J2000		V=17.3	Reference Frame: ICRS

*Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.*

<b>Exposures</b>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) J1419+4207	ACS/WFC, ACCUM, WFC1	F814W				Pattern 1, Exps 1-1 in Visit 01 (1)	570 Secs (2280 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] [=>(Pattern 4)]



Proposal 14269 - Visit 02 - Just the BASICS: Linking Gas Flows in the Circumgalactic Medium to Galaxies

Wed Apr 13 01:03:12 GMT 2016

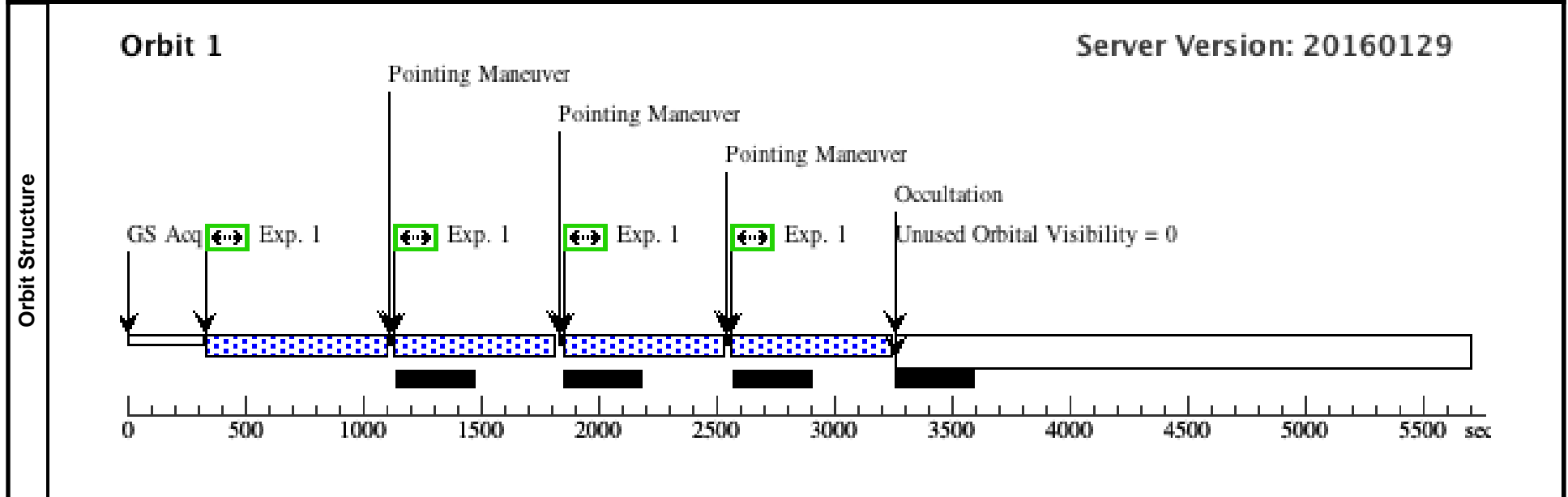
<b>Visit</b>	<b>Proposal 14269, Visit 02, scheduled</b>		
	<b>Diagnostic Status: No Diagnostics</b>		
	Scientific Instruments: ACS/WFC		
	Special Requirements: (none)		

<b>Patterns</b>	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.265 Line Spacing=0.187	Coordinate Frame=POS-TARG Pattern Orientation=20.67 Angle Between Sides=69.05 Center Pattern=false	

<b>Fixed Targets</b>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(2)	J1435+3604	RA: 14 35 11.5317 (218.7980488d) Dec: +36 04 37.29 (36.07703d) Equinox: J2000		V=17.2	Reference Frame: ICRS

*Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.*

<b>Exposures</b>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(2) J1435+3604	ACS/WFC, ACCUM, WFC1	F814W				Pattern 1, Exps 1-1 in Visit 02 (1)	570 Secs (2240 Secs) [=>560.0 Secs (Pattern 1)] [=>560.0 Secs (Pattern 2)] [=>560.0 Secs (Pattern 3)] [=>560.0 Secs (Pattern 4)]



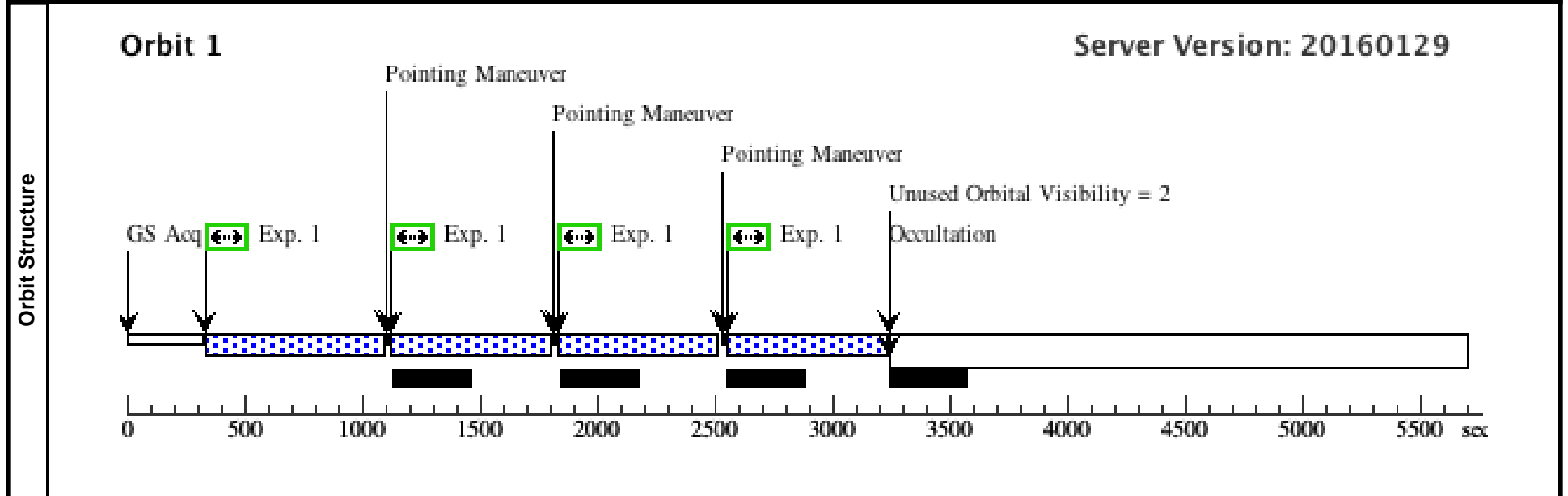
<b>Visit</b>	<b>Proposal 14269, Visit 03, scheduling</b>			
	<b>Diagnostic Status: No Diagnostics</b>			
	Scientific Instruments: ACS/WFC			
	Special Requirements: (none)			

<b>Patterns</b>	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.265 Line Spacing=0.187	Coordinate Frame=POS-TARG Pattern Orientation=20.67 Angle Between Sides=69.05 Center Pattern=false	

<b>Fixed Targets</b>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(3)	J1619+3342	RA: 16 19 16.5408 (244.8189200d) Dec: +33 42 38.36 (33.71066d) Equinox: J2000		V=17.3	Reference Frame: ICRS

*Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.*

<b>Exposures</b>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(3) J1619+3342	ACS/WFC, ACCUM, WFC1	F814W				Pattern 1, Exps 1-1 i n Visit 03 (1)	570 Secs (2216 Secs) [==>554.0 Secs (Pattern 1)] [==>554.0 Secs (Pattern 2)] [==>554.0 Secs (Pattern 3)] [==>554.0 Secs (Pattern 4)]



Proposal 14269 - Visit 04 - Just the BASICS: Linking Gas Flows in the Circumgalactic Medium to Galaxies

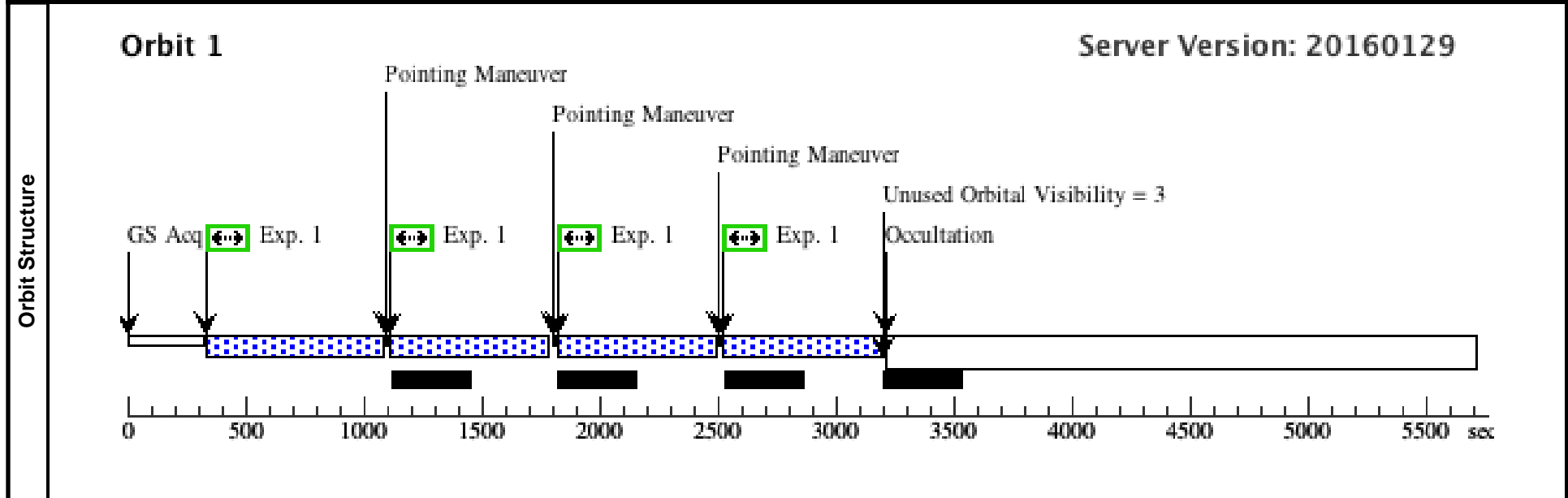
Wed Apr 13 01:03:12 GMT 2016

<b>Visit</b>	<b>Proposal 14269, Visit 04, scheduled</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: ACS/WFC Special Requirements: (none)		
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<b>Patterns</b>	#	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>
	(1)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.265 Line Spacing=0.187	Coordinate Frame=POS-TARG Pattern Orientation=20.67 Angle Between Sides=69.05 Center Pattern=false	(1)

<b>Fixed Targets</b>	#	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>
	(4)	J1005+0134	RA: 10 05 35.2468 (151.3968617d) Dec: +01 34 45.61 (1.57934d) Equinox: J2000		V=16.89	Reference Frame: ICRS
<i>Comments: Extended=NO</i>						

<b>Exposures</b>	#	<b>Label</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1	(4) J1005+0134	J1005+0134	ACS/WFC, ACCUM, WFC1	F814W			Pattern 1, Exps 1-1 in Visit 04 (1)	570 Secs (2180 Secs) [==>545.0 Secs (Pattern 1)] [==>545.0 Secs (Pattern 2)] [==>545.0 Secs (Pattern 3)] [==>545.0 Secs (Pattern 4)]	[1]



Proposal 14269 - Visit 05 - Just the BASICS: Linking Gas Flows in the Circumgalactic Medium to Galaxies

Wed Apr 13 01:03:12 GMT 2016

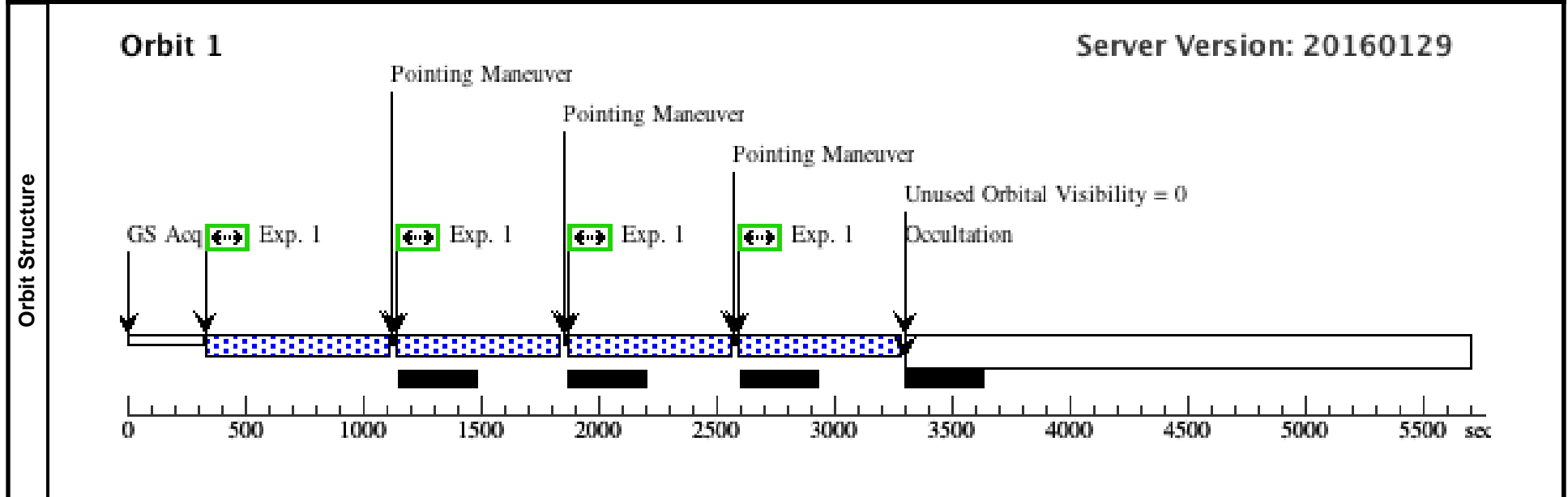
<b>Visit</b>	Proposal 14269, Visit 05, scheduled Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: (none)		

<b>Patterns</b>	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.265 Line Spacing=0.187	Coordinate Frame=POS-TARG Pattern Orientation=20.67 Angle Between Sides=69.05 Center Pattern=false	

<b>Fixed Targets</b>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(5)	PG1338+416	RA: 13 41 0.7747 (205.2532279d) Dec: +41 23 14.07 (41.38724d) Equinox: J2000		V=16.8	Reference Frame: ICRS

*Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.*

<b>Exposures</b>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(5) PG1338+416	ACS/WFC, ACCUM, WFC1	F814W				Pattern 1, Exps 1-1 in Visit 05 (1)	570 Secs (2280 Secs)
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]	[1]



Proposal 14269 - Visit 06 - Just the BASICS: Linking Gas Flows in the Circumgalactic Medium to Galaxies

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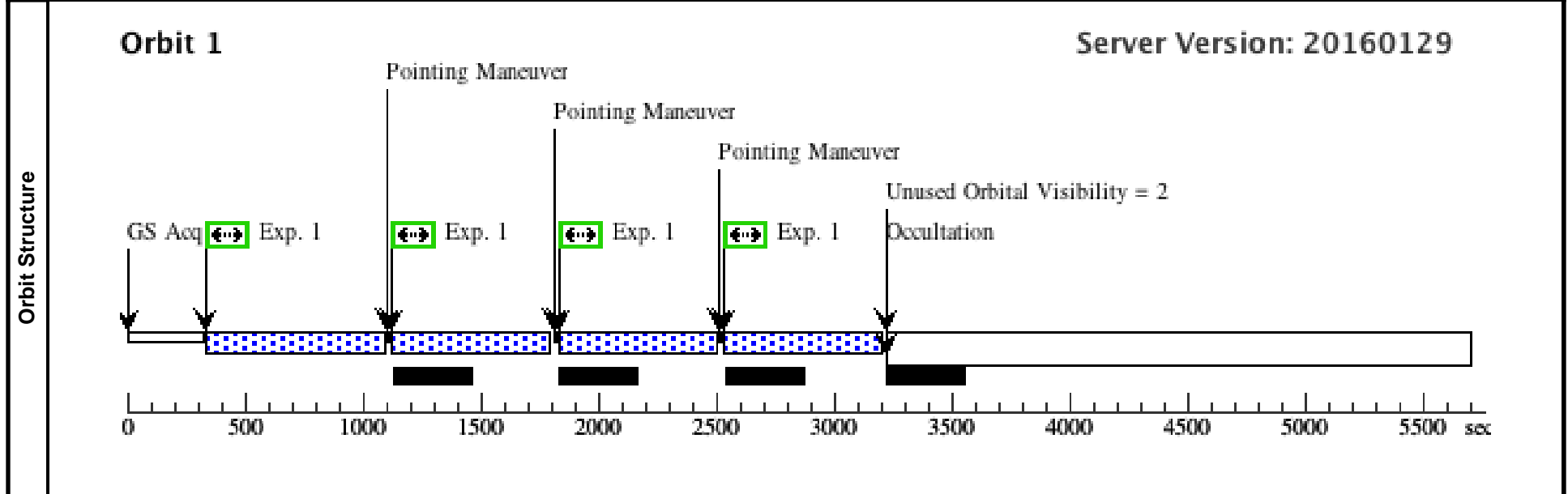
<b>Visit</b>	<b>Proposal 14269, Visit 06, scheduling</b>		
	<b>Diagnostic Status: No Diagnostics</b>		
	Scientific Instruments: ACS/WFC		
	Special Requirements: (none)		

<b>Patterns</b>	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.265 Line Spacing=0.187	Coordinate Frame=POS-TARG Pattern Orientation=20.67 Angle Between Sides=69.05 Center Pattern=false	

<b>Fixed Targets</b>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(6)	PG1407+265	RA: 14 09 23.8979 (212.3495746d) Dec: +26 18 21.04 (26.30584d) Equinox: J2000		V=15.7	Reference Frame: ICRS

*Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.*

<b>Exposures</b>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(6) PG1407+265	ACS/WFC, ACCUM, WFC1	F814W				Pattern 1, Exps 1-1 in Visit 06 (1)	570 Secs (2200 Secs) [=>550.0 Secs (Pattern 1)] [=>550.0 Secs (Pattern 2)] [=>550.0 Secs (Pattern 3)] [=>550.0 Secs (Pattern 4)]



Proposal 14269 - Visit 07 - Just the BASICS: Linking Gas Flows in the Circumgalactic Medium to Galaxies

Wed Apr 13 01:03:12 GMT 2016

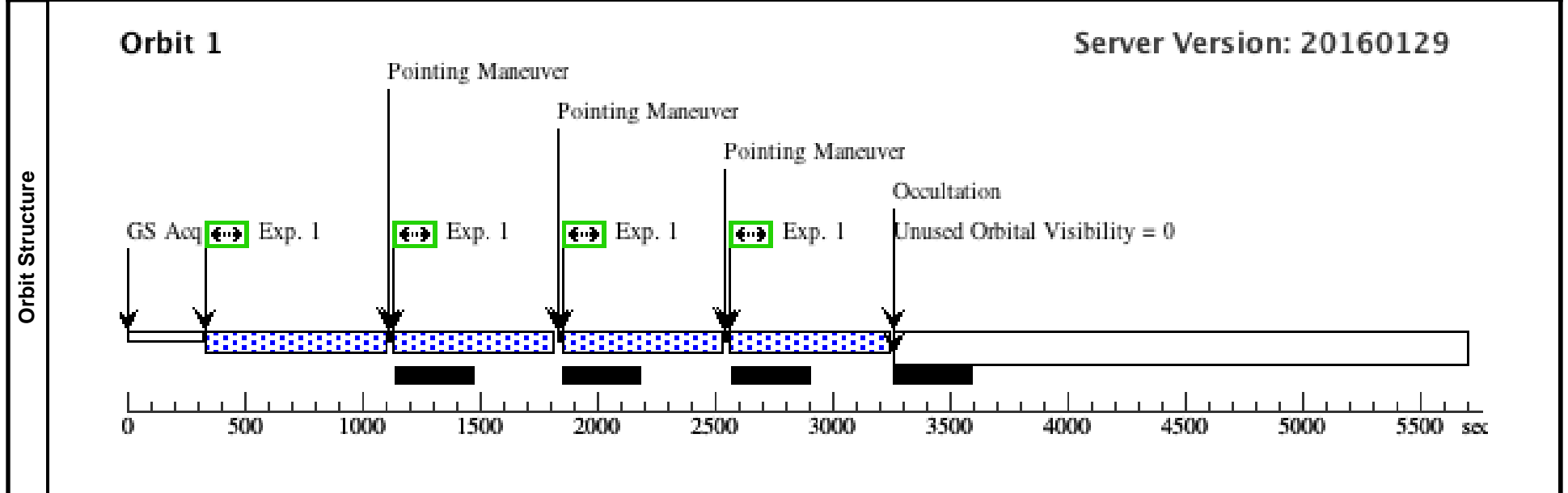
<b>Visit</b>	Proposal 14269, Visit 07, completed Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: (none)		

<b>Patterns</b>	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.265 Line Spacing=0.187	Coordinate Frame=POS-TARG Pattern Orientation=20.67 Angle Between Sides=69.05 Center Pattern=false	

<b>Fixed Targets</b>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(7)	PG1630+377	RA: 16 32 1.1077 (248.0046154d) Dec: +37 37 49.98 (37.63055d) Equinox: J2000		V=16.3	Reference Frame: ICRS

*Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.*

<b>Exposures</b>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(7) PG1630+377	ACS/WFC, ACCUM, WFC1	F814W				Pattern 1, Exps 1-1 i n Visit 07 (1)	570 Secs (2240 Secs) [=>560.0 Secs (Pattern 1)] [=>560.0 Secs (Pattern 2)] [=>560.0 Secs (Pattern 3)] [=>560.0 Secs (Pattern 4)]

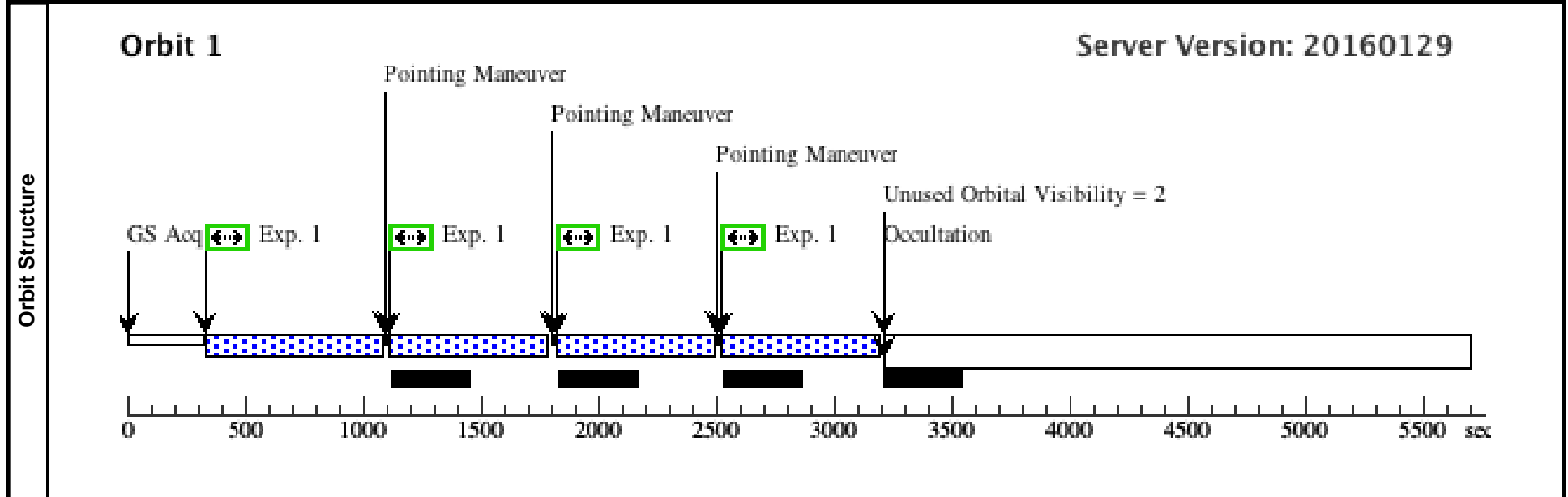


<b>Visit</b>	Proposal 14269, Visit 08, scheduling Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: (none)		

<b>Patterns</b>	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.265 Line Spacing=0.187	Coordinate Frame=POS-TARG Pattern Orientation=20.67 Angle Between Sides=69.05 Center Pattern=false	(1)

<b>Fixed Targets</b>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(8)	PG1522+101	RA: 15 24 24.5538 (231.1023075d) Dec: +09 58 29.77 (9.97494d) Equinox: J2000		V=16.2	Reference Frame: ICRS
	<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>					

<b>Exposures</b>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(8) PG1522+101	ACS/WFC, ACCUM, WFC1	F814W			Pattern 1, Exps 1-1 in Visit 08 (1)	570 Secs (2184 Secs)	
									[==>546.0 Secs (Pattern 1)] [==>546.0 Secs (Pattern 2)] [==>546.0 Secs (Pattern 3)] [==>546.0 Secs (Pattern 4)]	[1]



Proposal 14269 - Visit 09 - Just the BASICS: Linking Gas Flows in the Circumgalactic Medium to Galaxies

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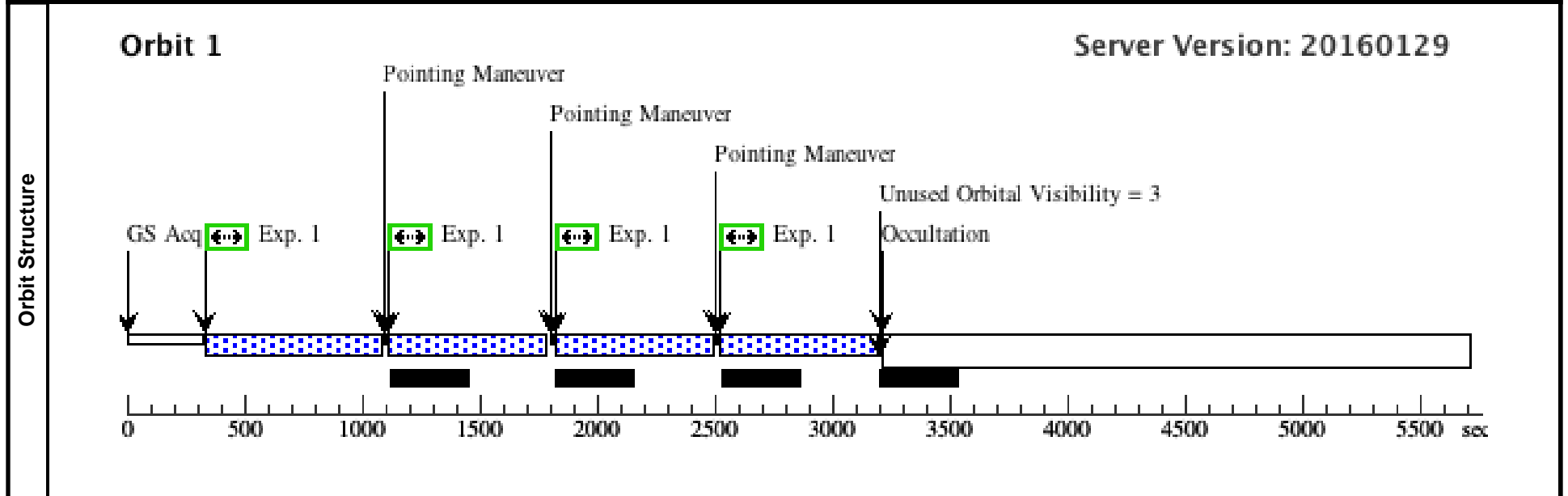
<b>Visit</b>	<b>Proposal 14269, Visit 09, scheduling</b>			
	<b>Diagnostic Status: No Diagnostics</b>			
	Scientific Instruments: ACS/WFC			
	Special Requirements: (none)			

<b>Patterns</b>	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.265 Line Spacing=0.187	Coordinate Frame=POS-TARG Pattern Orientation=20.67 Angle Between Sides=69.05 Center Pattern=false	

<b>Fixed Targets</b>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(9)	PHL1377	RA: 02 35 7.3420 (38.7805917d) Dec: -04 02 5.32 (-4.03481d) Equinox: J2000		V=16.46	Reference Frame: ICRS

*Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.*

<b>Exposures</b>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(9) PHL1377	ACS/WFC, ACCUM, WFC1	F814W				Pattern 1, Exps 1-1 i n Visit 09 (1)	570 Secs (2180 Secs) [==>545.0 Secs (Pattern 1)] [==>545.0 Secs (Pattern 2)] [==>545.0 Secs (Pattern 3)] [==>545.0 Secs (Pattern 4)]



Proposal 14269 - Visit 10 - Just the BASICS: Linking Gas Flows in the Circumgalactic Medium to Galaxies

Wed Apr 13 01:03:12 GMT 2016

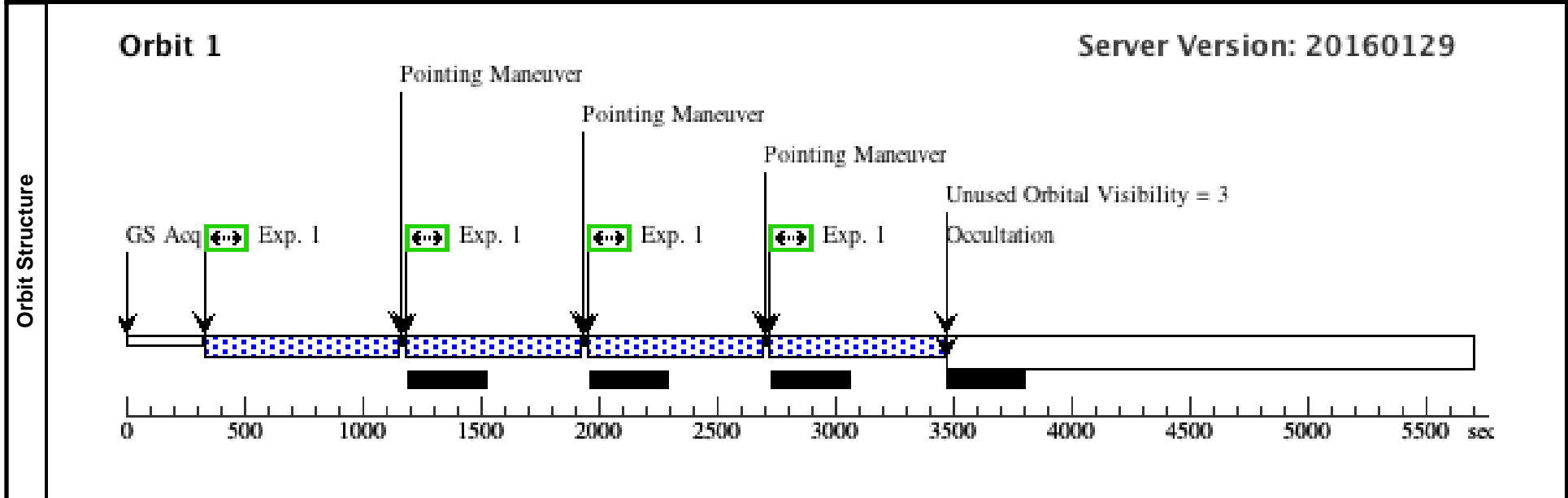
<b>Visit</b>	<b>Proposal 14269, Visit 10, implementation</b>		
	<b>Diagnostic Status: No Diagnostics</b>		
	Scientific Instruments: ACS/WFC		
	Special Requirements: ORIENT 280D TO 100 D		

<b>Patterns</b>	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.265 Line Spacing=0.187	Coordinate Frame=POS-TARG Pattern Orientation=20.67 Angle Between Sides=69.05 Center Pattern=false	

<b>Fixed Targets</b>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(10)	PKS0552-640	RA: 05 52 24.6000 (88.1025000d) Dec: -64 02 11.00 (-64.03639d) Equinox: J2000		V=15.0	Reference Frame: ICRS

*Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.*

<b>Exposures</b>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(10) PKS0552-640	ACS/WFC, ACCUM, WFC1	F814W				Pattern 1, Exps 1-1 i n Visit 10 (1)	570 Secs (2448 Secs) [==>612.0 Secs (Pattern 1)] [==>612.0 Secs (Pattern 2)] [==>612.0 Secs (Pattern 3)] [==>612.0 Secs (Pattern 4)]



Proposal 14269 - Visit 11 - Just the BASICS: Linking Gas Flows in the Circumgalactic Medium to Galaxies

Wed Apr 13 01:03:12 GMT 2016

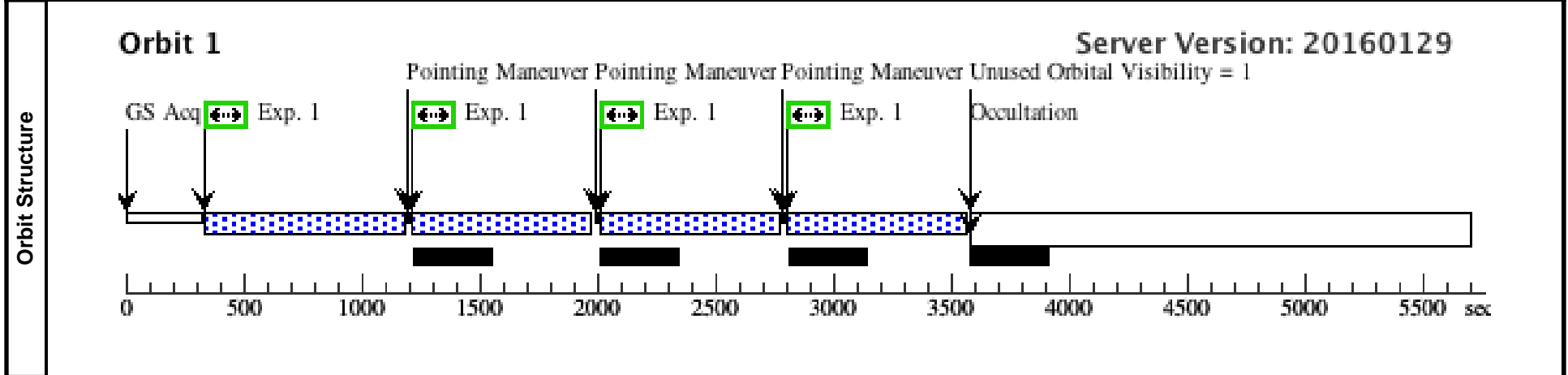
<b>Visit</b>	<b>Proposal 14269, Visit 11, scheduled</b>			
	<b>Diagnostic Status: No Diagnostics</b>			
	Scientific Instruments: ACS/WFC			
	Special Requirements: (none)			

<b>Patterns</b>	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.265 Line Spacing=0.187	Coordinate Frame=POS-TARG Pattern Orientation=20.67 Angle Between Sides=69.05 Center Pattern=false	

<b>Fixed Targets</b>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(11)	PKS0637-752	RA: 06 35 46.5144 (98.9438100d) Dec: -75 16 16.74 (-75.27132d) Equinox: J2000		V=15.8	Reference Frame: ICRS

*Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.*

<b>Exposures</b>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(11) PKS0637-752	ACS/WFC, ACCUM, WFC1	F814W				Pattern 1, Exps 1-1 i n Visit 11 (1)	570 Secs (2560 Secs) [==>640.0 Secs (Pattern 1)] [==>640.0 Secs (Pattern 2)] [==>640.0 Secs (Pattern 3)] [==>640.0 Secs (Pattern 4)]



Proposal 14269 - Visit 12 - Just the BASICS: Linking Gas Flows in the Circumgalactic Medium to Galaxies

Wed Apr 13 01:03:12 GMT 2016

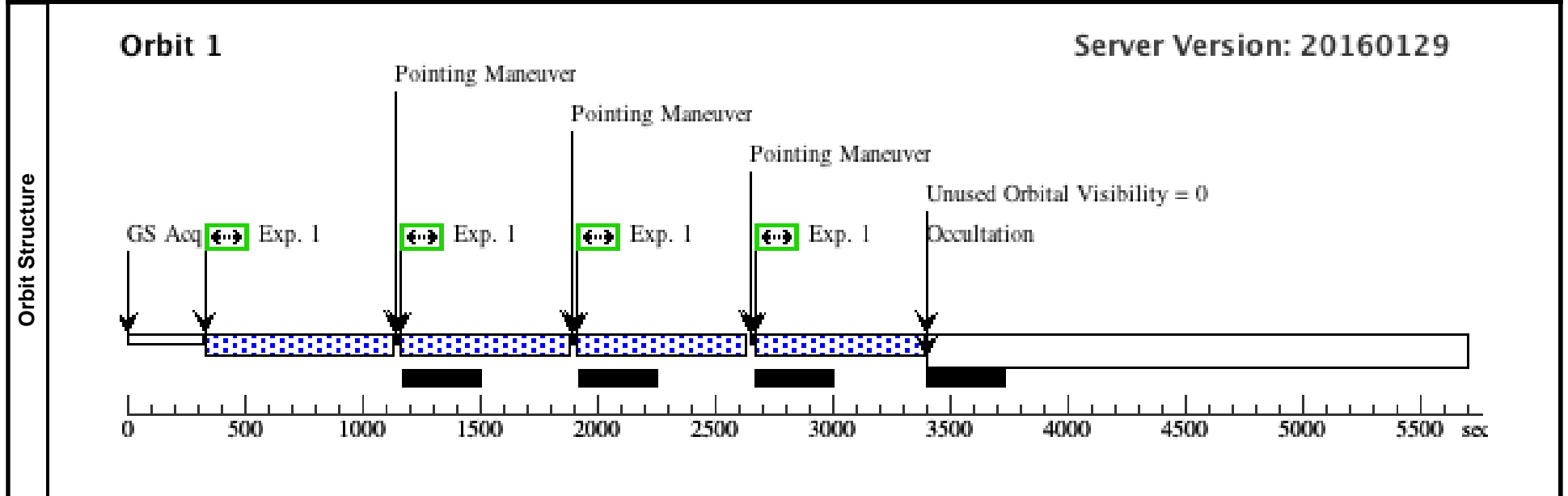
<b>Visit</b>	<b>Proposal 14269, Visit 12, implementation</b>		
	<b>Diagnostic Status: No Diagnostics</b>		
	Scientific Instruments: ACS/WFC		
	Special Requirements: ORIENT 270D TO 290 D		

<b>Patterns</b>	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.265 Line Spacing=0.187	Coordinate Frame=POS-TARG Pattern Orientation=20.67 Angle Between Sides=69.05 Center Pattern=false	

<b>Fixed Targets</b>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(12)	HE0439-5254	RA: 04 40 12.0445 (70.0501854d) Dec: -52 48 17.65 (-52.80490d) Equinox: J2000		V=16.1	Reference Frame: ICRS

*Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.*

<b>Exposures</b>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(12) HE0439-5254	ACS/WFC, ACCUM, WFC1	F814W				Pattern 1, Exps 1-1 in Visit 12 (1)	570 Secs (2376 Secs) [==>594.0 Secs (Pattern 1)] [==>594.0 Secs (Pattern 2)] [==>594.0 Secs (Pattern 3)] [==>594.0 Secs (Pattern 4)]



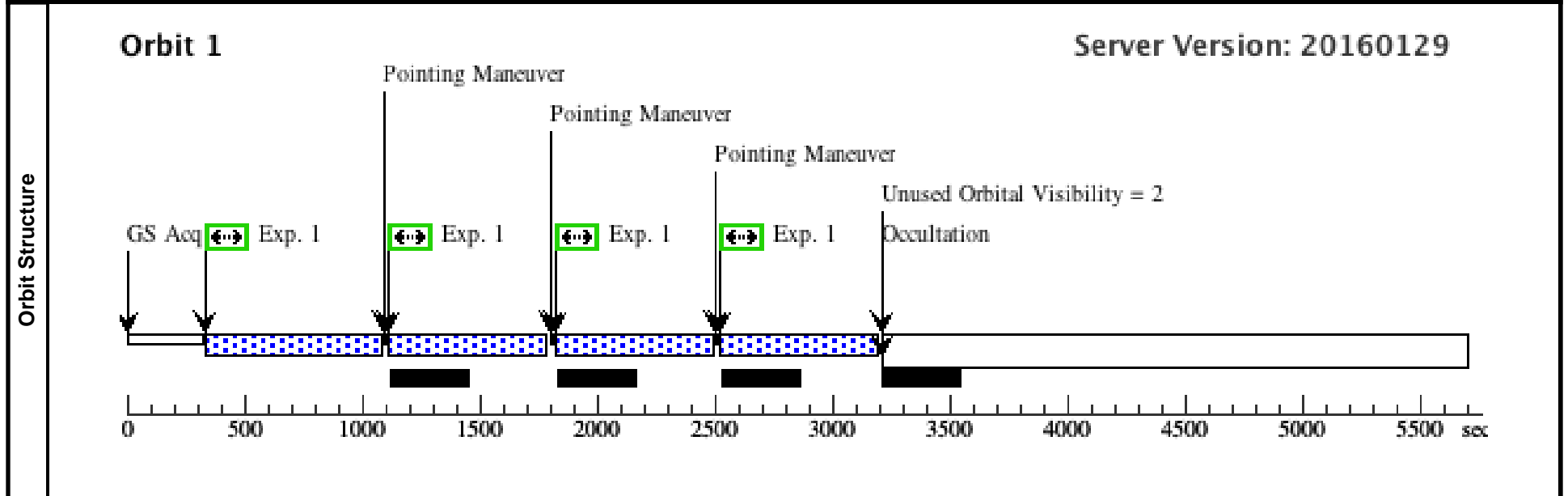
<b>Visit</b>	Proposal 14269, Visit 13, completed Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: (none)		

<b>Patterns</b>	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.265 Line Spacing=0.187	Coordinate Frame=POS-TARG Pattern Orientation=20.67 Angle Between Sides=69.05 Center Pattern=false	

<b>Fixed Targets</b>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(13)	J0943+0531	RA: 09 43 31.6203 (145.8817513d) Dec: +05 31 31.48 (5.52541d) Equinox: J2000		V=17.3	Reference Frame: ICRS

*Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.*

<b>Exposures</b>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(13) J0943+0531	ACS/WFC, ACCUM, WFC1	F814W				Pattern 1, Exps 1-1 i n Visit 13 (1)	570 Secs (2184 Secs) [==>546.0 Secs (Pattern 1)] [==>546.0 Secs (Pattern 2)] [==>546.0 Secs (Pattern 3)] [==>546.0 Secs (Pattern 4)]



Proposal 14269 - Visit 14 - Just the BASICS: Linking Gas Flows in the Circumgalactic Medium to Galaxies

Wed Apr 13 01:03:12 GMT 2016

<b>Visit</b>	Proposal 14269, Visit 14, completed Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: (none)		
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<b>Patterns</b>	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.265 Line Spacing=0.187	Coordinate Frame=POS-TARG Pattern Orientation=20.67 Angle Between Sides=69.05 Center Pattern=false	(1)

<b>Fixed Targets</b>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(14)	PG1634+706	RA: 16 34 28.9897 (248.6207904d) Dec: +70 31 32.42 (70.52567d) Equinox: J2000		V=14.7	Reference Frame: ICRS

*Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.*

<b>Exposures</b>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(14) PG1634+706	ACS/WFC, ACCUM, WFC1	F814W			Pattern 1, Exps 1-1 in Visit 14 (1)	570 Secs (2568 Secs) [==>642.0 Secs (Pattern 1)] [==>642.0 Secs (Pattern 2)] [==>642.0 Secs (Pattern 3)] [==>642.0 Secs (Pattern 4)]	[1]

